CLAIMS:

1.   A receiver for receiving, in a given frequency band, a digital signal which is formatted in successive data frames, the receiver comprising:

-    a filtering block for filtering the received signal in at least one frequency sub-band,

-    a saturation detector for detecting a saturation of the signal in one of the filtered

5   frequency sub-bands and for supplying saturation information of said sub-band,

-    a bad-frame detector for detecting a transmission error in a received frame, referred to as current frame, as a function of the saturation information of the sub-band with which the current frame is associated, and for deriving a bad-frame indication.

10   2.   A receiver as claimed in claim 1 for receiving a digital signal having a magnitude whose value has a probability which is higher than a fixed threshold to evolve, in the sequence of the frames, within a tolerance interval comprising at least a value taken during a preceding frame which has not been indicated as a bad frame by the bad-frame detector, said bad-frame detector in said receiver being provided for detecting an abnormal

15   evolution of said value outside said tolerance interval.

3.   A receiver as claimed in claim 2, wherein the saturation detection device is provided with comparison and computing means for computing an average value of said magnitude in a sub-band and for comparing it with a reference value for deriving said

20   saturation information.

4.   A receiver as claimed in claim 2, wherein the bad-frame detector comprises:

-    an error detector for detecting a transmission error in a frame of the sub-band and for supplying an error signal,

25   -   a decision block for receiving the saturation information of the relevant sub-band from the saturation detector, on the one hand, and the error signal from the error detector, on the other hand, for deciding that the current frame is a bad frame when the error signal indicates a transmission error and when the saturation information indicates that the sub-band is not saturated.

5.   A receiver as claimed in any one of the preceding claims, wherein said magnitude is representative of an energy of the received signal.

5 6.   A method of receiving, in a given frequency band, a digital signal which is formatted in successive data frames, the method comprising the steps of
-    filtering the received signal in at least one frequency sub-band,
-    detecting a saturation of the signal in one of the filtered frequency sub-bands and supplying saturation information of said sub-band,
10 -   bad-frame detection for detecting a transmission error in a received frame, referred to as current frame, as a function of the saturation information of the sub-band with which the current frame is associated, and for deriving a bad-frame indication.

7.   A computer program product for a receiver as claimed in claim 1, comprising
15 software code portions which, once loaded into the receiver, allow it to perform the steps of the method as claimed in claim 6.

8.   A telephone for receiving digital signals from a telecommunication system, characterized in that it comprises a receiver as claimed in claim 1.

20

9.   A telecommunication system for exchanging digital signals between at least a transmitter and a receiver, characterized in that it comprises a receiver as claimed in claim 1.